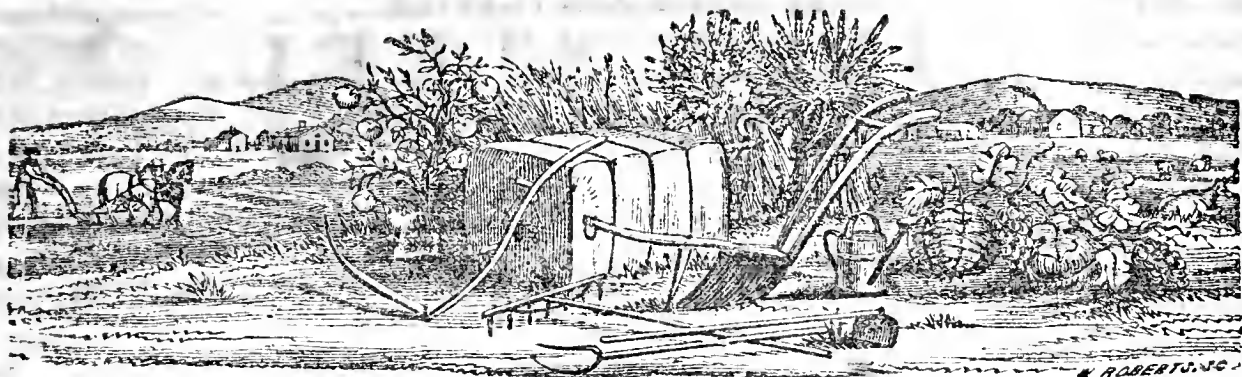


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THE FARMER AND PLANTER.

Devoted to Agriculture, Horticulture, Domestic and Rural Economy.

Vol. VIII.

PENDLETON, S. C., AUGUST, 1857.

No. VIII.

The Farmer and Planter

IS ISSUED MONTHLY AT PENDLETON, SO. CA.,

BY GEORGE SEABORN,

Editor and Proprietor.

S. W. LEWIS, Publisher.

TERMS:

1 copy, one year (invariably in advance)	\$1 00.
6 copies one year	5 00.
25 copies one year	20 00.
100 copies one year	75 00.

Advertisements will be inserted at the rates of seventy-five cents a square, (twelve lines or less,) for the first insertion, and fifty cents for each subsequent one.

Liberal deductions will be made to liberal advertisers.

The postage on the Farmer and Planter is, anywhere in the State, three-fourths of a cent, and out of the State one cent and a half per quarter.

For the Farmer and Planter.

Breeding Stock.

MR. EDITOR:—This subject is less understood by the people of this country, or indeed of any country, than is almost any other which falls under their daily observations. Few have taken pains to examine it, and of those, still fewer have understood the proper mode of arriving at satisfactory results. We find the following in the *American Veterinary Journal*, and commend it to the notice of all interested in the subject:

ON AN INFLUENCE, AFFECTING THE PURITY OF BLOOD IN STOCK.

The breeding and rearing of stock; especially animals of high and pure blood, is daily attracting an increased attention from the Scientific Agriculturist; and when the farmer suc-

ceeds in obtaining animals possessing the qualities sought for, there is no branch of his business that pays so well in dollars and cents as this; but so many failures are met with, and so many are disappointed in the progeny of animals of even the purest and most renowned pedigree, that even among the enlightened it is not seldom that we hear of advantages of blood questioned, if not denied, and it is more than intimated that animals possessing superior qualities, owe their excellence mainly to the care bestowed upon them in regard to their feed, &c. In regard to other departments of agriculture, similar discrepencies of opinion do not obtain, and it would seem of importance to determine why this difference of opinion in this regard.

All are accustomed to rely upon experience, and it must be allowed that in this matter, many who have been to considerable trouble and expense in their endeavor to improve their stock of horses, cattle or sheep, by breeding from animals of the improved breeds, have experienced a grievous disappointment in not finding the young to resemble the sire or the dam, as the case may be, as closely as they had hoped; and without being able to account for this fact in accordance with any laws that are known to them, and only knowing that they have failed of the expected improvement in their animals, they have naturally come to deny, or at least to doubt what others have told them.—This has been one, and perhaps the main reason why so little attention has been paid by the majority of farmers to the introduction of imported and other improved races of animals. But the English agriculturist seem to under-

stand the causes of these failures, and of course, how to avoid them, and it would be well if this information were more generally disseminated in this country. The reason is this, *the mother's system is influenced and changed by the young she carries in her womb, and if the male parent be of a different breed, her blood is contaminated and she rendered similar to a mongrel for the remainder of her life.*

This assertion may startle many who have given the subject no thought, but it is believed that no physiological fact is better established, or more sensible of proof than this, and as a proof, I shall cite a few instances that have been noticed by Dr. A. Harvy, Physician to the Aberdeen Royal Infirmary. He speaks of a young chestnut mare, seven eighths Arabian, that belonged to the Earl of Moreton, which was covered in 1815, by a Quagga, which is a species of the wild ass of Asia, and marked somewhat after the manner of the zebra. The mare was covered but once by the Quagga, and after a pregnancy of eleven months and four days, she gave birth to a hybrid, which had distinct marks of the quagga in the shape of its head, black bars on the legs and shoulders. In 1817, 18, and 21, the same mare (which had in the mean time passed into the possession of sir George Onsley,) was covered by a very fine black Arabian horse, and produced successfully three foals, all of which bore unequivocal marks of the quagga.

Another case similar to the above, is animated. A mare belonging to sir George Onsley, was covered by a zebra, and gave birth to a striped hybrid. The next year this mare was covered by a thorough-bred horse; and the next succeeding year, by another horse, and the in this instance, also, both the foals were striped, and in other regards, partook of the characteristics of the zebra. It is a matter of common observation, that when a mare has borne a mule, she is never after fit to breed colts, as they will have large heads, and otherwise resemble mules.

In the above mentioned instances, the mares were covered by animals in the first instance, of a different species from themselves, but others are recorded where they were bred from horses, but by horses of different breeds on the separate occasions, and yet the offspring partook of the characteristics of the horse, by which the first pregation was affected.

Mr. McGillivray, in an article, published in the *Aberdeen Journal*, speaks of several colts in the royal stud at Hampton Court, that were sired by the horse Actakon, that did not re-

semble Actakon the paternal parent of the foals, but did bear a near resemblance to the horse, Colonel, from whom the mares brought colts the year previous to their being covered by the horse Actakon. Again, of a colt, the prospect of the Earl of Suffield, which was got by the horse Saurel, that it was strongly intimated by the jockeys of newmarket, that he must have been got by the horse Camel. This resemblance was, however, satisfactorily accounted for, by the fact that the mare had been previously impregnated by the horse Camel.

Many instances of a similar character are recorded in regard to dogs, in fact the breeders of dogs all seem well aware, if the bitch has been impregnated by a mongrel dog—that even if the father of her next litter is of pure blood, the puppies will be liable to be mongrel.

Similar instances have also been observed in regard to swine, and the breeders of cattle have recorded similar facts. Mr. McGillivray, mentions several instances, and among them is the following: "A pure Aberdeen shire heifer was served with a pure Teeswater bull, to whom she had a first cross calf. The following season, the same cow was served with a pure Aberdeenshire bull, the produce was a cross calf, which at two years old had very long horns—the parents both hornless. A pure Aberdeenshire cow was served in 1845, with a cross bull, J. E., an animal produced between a first cross cow and a pure Teeswater bull; to this bull she had a cross calf. Next season she was served with a pure Aberdeenshire bull, the calf was quite a cross in shape and color."

After citing other examples with similar results, Mr. McGillivray says, many more instances might be cited, did time permit. *Among horses and cattle they are of every day occurrence.*

Dr. Harvey, also records many instances of similar results as having occurred in the human family, but it is not thought best to include them in this paper. This mode of impairing the purity of the blood of animals, has been styled *crossing the system* of the mother; and it is supposed that the reason why so many inferior animals are to be met with the progeny of pure lineage, is almost wholly owing to the blood of the mothers having been contaminated previously by the cross-bred young she has carried.

Of the *modus operandi* of this contamination, there is no explanation given which is generally satisfactory; but it seems probable to the writer of this, that inasmuch as the same blood must circulate through the veins of mother and

offspring, the system of the dam becomes *thus modified* and rendered in a greater or less degree, similar to her mongrel young.

D***.

For the Farmer and Planter.
Manuring for Corn.

MR. EDITOR:—In reading a late issue of the Farmer and Planter, I noticed a communication from one "Tom Singleton," the expediency of which I think doubtful. With an air of triumph he has published to the world at large, the best and most profitable plan of applying manure to corn. He seems to think one quite simple who does not understand the most advantageous plan of applying manure after it is made. The difficulty with him is making and saving it properly, with me, applying it so that it will remunerate me for the expense and trouble; any one can make and apply manure, but very few understand applying it properly.

Through your paper, I asked information, hoping that some of your *able contributors* would enlighten us on the subject of corn manuring; acknowledging at the same time my ignorance as to the most profitable plan. But instead of receiving instruction, as I anticipated, have only been more confused by Singleton's explanation.

Manure is not quite so plentiful in this section of country, as to warrant a man in applying two hundred large waggon loads to every five acres; if it was, I should have never asked for any information whatever. I think it very probable that I could have applied that quantity very advantageously, without instruction. I have two neighbors, large planters; one cultivates a light sandy soil, the other a stiff clay soil; the sandy soil planter applies his manure while planting; the clay soil planter applies his when the corn is from half leg to knee high (latter part May). Both are considered excellent planters. The clay soil man makes the best corn, but some contends that he plants the best land, and that if both cultivated the same quality of land, that the sandy soil man would make the best crops. I have endeavored to make this question plain; will some one add the lustre of his pen?

Your obedient servant, PLOWSTOCK.

Williamsburg District, June 15th, 1857.

For the Farmer and Planter.
Hedging.

MR. EDITOR:—In the May No. of the Farmer and Planter, I find an article headed, Osage Orange; in which article a subscriber asks for

information, relative to the cultivation of the Osage Orange. In the same article, you ask the question; can any of our readers who are posted up, give us light? Since light is your object, and as I have some experience with the cultivation of the Osage Orange, I will briefly state the plan of cultivation of the above named shrub in Texas, where it grows spontaneously. The seeds are sown in drills, (two drills running parallel,) 18 inches apart; and after one year's growth, if not as thickly set in the drills as is desired, they are cut off six inches above the ground, which causes a number of small suckers to spring up thereby, making in three years a hedge which even a rabbit will not dare to penetrate.

I have given above, one of the plans of raising hedges in Texas. There are other plans, but the one I have given, I think best adapted to the older States. The Orange has been raised in single rows on the rich prairies, and made to answer a good purpose, but the double drill is best.

You may be right in preferring the Cherokee, Microphylla, and McCartney rose for hedging in that country, but I can say from experience, that neither of the above named roses are equal in Texas, to the Orange for hedging; from the fact that many of the roses annually trespass on your premises while the Orange never trespasses beyond the growth of the original stock.

It might be well to state that the seed should be sown so as to have a good stand in each drill, for transplanting only adds labor to unnecessary delay in hedge making, but should the seed fail to come well from the sowing, the spaces, (which should not be over 8 or 10 inches,) must be filled with settings.

MEDICUS.

Omega, Texas, May 30th, 1857.

For the Farmer and Planter.
Cross of Grain.

MR. EDITOR:—I feel disposed to impart to the readers of the Farmer and Planter, any information likely to be of interest to the planting community. I will now give my experience in crossing or mixing seed corn. Five years ago, I took it into my head that if a cross would improve stock, that grain might be improved by mixing. At all events, I set about making the experiment. So I obtained some seven or eight different kinds of corn, or at least I obtained such as I thought different, such for instance as the large yellow, half gourd seed, &c., the large white flint, &c., and after shelling about equal quantities of the different kinds,

and mixing well, I proceeded to plant and cultivate in the usual way in this country, (Eastern Texas,) and to my delight I made a fine crop, (40 bushels,) with only one plowing after breaking out the balks; while 20 to 40 bushels is the general yield of corn on up land. I have been planting the same corn ever since, (five years,) and I have not found a single rotten ear in my cribs during the time, while my neighbors generally complain of their corn being rotten.

MEDICUS.

Omega, Texas, May 30th, 1857.

Corn, Rye, and Indian Bread.

We have been resolved into a committee for a special report on this very important branch of the great culinary art, and if our readers do not understand and act discreetly in reference to it hereafter, it is not our fault.

We profess to speak, in the following passages, *ex cathedra*, and if others do not succeed in their earlier experiments, they must try again.

CORN-BREAD AS MADE AT GREEN'S, CHAMBERS-ST., N. Y.:—Take 7 pints yellow corn-meal, 3 pints wheat flour, and mix them well together; then 6 eggs, well-beaten, 2 cups of melted butter, and a little salt and sugar to suit the taste. Put this mass together, and mix with milk to make a batter about the consistency or stiffness of paste prepared for drop-cake. Then dissolve three teaspoonsful of cream of tartar, and the same of soda; pour it upon the mass, stir it thoroughly, and dip it at once into pans, and bake in a hot oven.

CORN-BREAD AS MADE AT CROCK'S, CHATHAM-ST., N. Y.:—Take 1 quart of milk, 3 eggs, beaten, butter half the size of an egg, cream of tartar,* 1 teaspoonful, salt and sweeten to your taste. To this add corn-meal to make a paste about the consistency of griddle-cakes; put in pan immediately, and bake in a hot oven.

BOSTON BROWN-BREAD:—To make this article, take of best yellow corn-meal two parts; of unbolted rye-meal (the rye should be screened before grinding) one part; partially wet and mix the corn-meal with hot water, and then add the rye and the yeast, (hop-yeast, one pint to nine quarts of meal,) and thoroughly mix with more warm water, if necessary, to make a mass neither hard nor soft, but stiff enough to be transferred with care by the hand from the kneading trough to the pan; then let it stand till it begins to show signs of rising; put it into the pans, and let it stand a few minutes, if it is not "rising" too fast, then put it to bake; if in a brick oven, six hours will be none too many; if in a common stove or range, care must be had not to burn, and bake from three to six hours according to size of loaf. The heat should be moderate after the first two hours, but steady; keep up a scalding heat after the outside is browned properly.

Many people use three quarts or pounds of rye-meal to five quarts or pounds of corn-meal,

which, we think, are the best proportions for pure New England "rye and Indian." S. D. Ostrander, Boston brown-bread baker, of this city, 378 Bleeker street, uses 2 parts rye to 4 of corn-meal, and hop-yeast, adding a little molasses to a part to suit the taste of customers.—Too much molasses is worse than none for most people.

But we next give the receipt which we would set forth as making a better article than all the brown-bread ever baked in the city of Boston, where, of course, bakers only imitate the "real original" article made by the housewives of Yankeeland. It will be perceived that we still hold on upon milk, and though a large proportion of this bread is mixed with water only, we go for this liquid as a valuable improvement.

REAL NEW-ENGLAND BROWN-BREAD:—Take equal proportions of sifted rye and Indian meal, mix them well together; add half a tea-cup-full of molasses, and two gills of good yeast, to about three quarts of the mixed meal. Wet this with good new milk, sufficient to make a dough that can easily be worked, even with one hand. For economy's sake, milk that has stood twelve hours, and from which the cream has been taken, may be a substitute for the new milk; or water which has been pressed from boiled squash, or in which squash has been boiled is a substitute much better than pure water. But warm water is more commonly used. The ingredients should be thoroughly mixed, and stand, in cold water, for twelve hours; in warm weather two hours may be sufficient before baking.

If baked in a brick oven, a three-quart loaf should stand in the oven all night. The same quantity in three baking-pans will bake in about three hours.

Serve this warm from the oven, with good, sweet butter, and we could *feast** upon it every morning for breakfast, from January to December.—*Plow, Loom and Anvil*.

*Feast on warm bread and butter! You are no dyspeptic.—Ed. F. & P.

Errors in Tree Planting.

In traveling over the country, one is forced to the conclusion that there is a lamentable degree of ignorance among those who plant trees, in regard to the laws of vegetable physiology. We often see whole orchards of young fruit trees just planted from the nursery with all their branches entire. In taking up trees there are very few nurserymen who take the trouble to preserve entire more than half or two thirds of the roots, and the parts that are cut off are the most important, because they contain the *months* by which the tree is fed. It is through the ends of the minute fibrous roots that plants receive their nourishment from the soil in a state of solution. If a tree is deprived of these by violence, it lingers until nature in her efforts restores the injury. Now, while this is the case with all transplanted trees, what is to be done to aid nature in this work of restoration? A tree planted with one half its roots mutilated and gone, and its top entire has lost its balance.

*Why, cream of tartar without soda?—Ed. F. & P.

The trunk and branch of a healthy tree always contain sufficient vital power to swell its buds and open the first leaves, even without material supply from the roots, but after the buds have thus burst forth, they draw up or pump, (if we may use the term,) the future nourishment for the tree, through the roots from the soil. If the roots from the injury they have received are unable to supply the demand, the leaves will draw upon the vital juices, (the blood,) of the tree, which they exhale in the air, and for want of a further supply the tree withers and dies. But if the branches are shortened and the number of leaves reduced in proportion to the roots, the leaves exhale no more than the remaining roots can supply—an equilibrium is restored—the circulation goes on healthily and the tree recovers from the injury it has sustained, and by fall it makes a vigorous growth.

Such trees, when planted should have all their surplus branches cut off and the remainder shortened, leaving but three or four buds to each branch of the last years growth.

Another class of tree planters, or the planters of another class of trees, particularly deciduous ornamental trees, such as we frequently see upon the side walks in cities and in lawns around country residences, are very liable to commit an opposite blunder. Trees in these situations require to be large, and whether nursery grown or Maples, Elms, &c., taken from the woods, they are not convenient to handle with the branches on, and with one clean sweep the planter dedicates his victim, leaving not a branch behind. Now, as we have said before, the leaves serve to draw from the soil, through the roots of a tree, the nourishment that is required to build up its trunk and branches. If the buds are all cut off there can be no leaves, until nature in an undue effort creates new ones. This can only be done through the vital powers stored up in the body of the tree, and this is often found insufficient, and the result is alike disastrous as in the case before mentioned.

Besides the office of leaves to supply the tree with food from the soil, they perform another important function, viz: that of *breathing*.—The leaves are to plants what the lungs are to animals. Deprive a tree of its leaves and it can neither breathe nor eat and must necessarily die.—*Valley Farmer*.

From the Farmer's Journal.
Green Crops as a Manure.

DR. TOMPKINS: The ideas and opinions of many of our farmers with regard to the action and value of green crops as a fertilizer, are vague and indefinite. Some expect too much and some too little from them without regard to the kind or quality of the soil to which they are applied. That they are valuable for all soils deficient of humus any one may become satisfied who will experiment.

In process of decomposition they furnish a constant supply of carbonic acid, under the stiffest clays light and pliable; while the mould which results from their decay retains the gaseous parts of volatile manures.

But a soil already well charged with organic matter will be injured rather than benefitted by the application of green crops, unless alkalies are used freely to neutralize the acid always generated under such circumstances.

These remarks have been suggested by an article upon the Oregon pea as a fertilizer which I read a few days since. The writer of that article says that a coat of Oregon peas turned under the soil is equal to a dressing of guano. His land, I presume, contained the elements of guano before, which the plant took up from below and returned to the surface, for it is not probable that it produced them. But upon this point I quote from Leibig who is very high authority:

He says "Woody fibre in a State of decay is the substances called humus. Humus acts in the same manner in a soil permeable to air as the air itself; it is a source of carbonic acid which it emits very slowly. An atmosphere of carbonic acid formed at the expense of the oxygen of the air, surrounds every particle of decaying humus, and is the first and most important food of young plants. We may furnish a plant with carbonic acid. We may supply it with humus in the most abundant quantity, but it will not attain complete development unless nitrogen is also afforded to it, an herb will be formed, but no grain; even sugar and starch may be produced but not gluten. But on the other hand, the supply of nitrogen in the form of ammonia will not suffice, although ammonia is of the utmost importance for the vigorous growth of plants, it is not in itself sufficient for the production of vegetable casein fibrin or albumen. The substances are not known in a free state, for they are always accompanied by alkalies, sulphates and phosphates. We must therefore, assume that without their co-operation ammonia could not exercise the slightest influence on the growth and formation of seeds; that in such a case it is a matter of perfect indifference whether ammonia is conveyed to them or not, for it will not assist in the formation of the constituents of the blood unless the other conditions necessary for their production be present at the same time." Ag. Chem., page, 179.

"The ashes of the tobacco plant, of the vine of peas and clover, contain a large quantity of lime. Such plants do not flourish in soils devoid of lime. By the addition of salts of lime to such soils they become fitted for the growth of these plants, for we have every reason to believe that their development essentially depends upon the presence of lime.

"The supposition that alkalies, metallic oxides or inorganic matter in general are produced by plants is entirely refuted by these well authenticated facts." Page 76.

My experience confirms the theory of Leibig to the letter; I have turned under green crops in every variety of soil. The early growth of crops upon them was vigorous and the size of the straw or stalks much larger than upon land of the same kind to which no green crops had been applied; but the product of grain was the same unless there was an excess of vegetable matter in which case it was less. But in every instance where I have used alkalies and phos-

phates with green crops the product has been greatly increased.

A deep rooted plant will doubtless penetrate the subsoil to some extent, and if it contains mineral elements the plant will bring them to the surface where they can be appropriated by crops; but the free use of the subsoil plough will accomplish this and more expeditiously and at the same time add many advantages which result from deep disintegration of subsoils.

BEAUFORT.

Farmer Pennywise and Farmer Poundwise.

There is a farmer Pennywise with whom I am acquainted, who will occasionally raise a good heifer, steer or colt for his neighbors who keep good breeds, and he is by accident occasionally benefitted thereby. When he has such an animal in his flock, he is apparently uneasy until it is disposed of; and after selling such an animal, a heifer for instance, you may hear something like the following:

"Well, my dear, I have sold the big heifer for fifteen dollars; is that not a good price for a heifer of her age?"

"Good price, indeed!" his wife would reply "you had better have sold two of them cat-hammed, crooked-legged, scrawly thing that you always keep for cows. The reason that our cattle always look so bad, and that we sell so little butter and cheese, is that you always sell the best heifers."

Poor woman! I pity her. Her pride and ambition are injured, her children and self in rags, because her native industry and economy are cramped by the foolish and niggardly policy of her husband.

The picture is reversed in Farmer Poundwise who always keeps the best animals until full grown; then, selecting his best breeders for his own uses, he sells the rest. If he has a good young horse, he will say that he will make a fine team horse; if a mare, she will make a fine breed mare.

"And what will you do with that?" says his neighbor, pointing to an ordinary animal.

"Between you and I," says he, "I shall sell that colt the first chance. Such an animal spoils the looks of the rest, and will not pay for his keeping."

Thus he will sell his poor steers, heifers, sheep, and pigs, at the first offer. If not sold, he would fatten those that would pay the expense of fattening! Are there any cattle, sheep, or hogs that will not pay the expense of fattening! Reader, take some of each—of the real Pharaoh breed—feed them until fat; keep an exact account of the expenses, and you can answer this question yourself. In this way Farmer Poundwise always has valuable stock; his steers are ready sale and command a good price; his horses are the best in the neighborhood, and the first to be looked at by purchasers. So with all the animals he raises. Pennywise, on the contrary, is thronged with an ill-shaped, worthless stock, that none will buy or pay the expense of raising; which are continually eating out his substance and making no return. Thus Pennywise drags on a miserable

life in the road to ruin, while Poundwise moves easily and happily along in the road to wealth.
—*Maine Farmer.*

Eradication of Wire Grass.

The following letter has attracted much attention in lower Virginia. It is addressed to Edmund Ruffin, Esq.:

Extract of a letter from Judge J. B. Christian, written to, and by request of the Agricultural Commissioner.

WILLIAMSBURG, March 24, 1854.

"I had, in Williamsburg a lot of ground of about two acres, of light soil and very rich. It had been kept enclosed, and used only for grazing for 8 or 10 years. I determined to sow it down in oats; and preparatory thereto, late in the fall of 1849, I had the lot well ploughed with a double horse plough. In the spring it was again ploughed and sowed in oats. The ground was as thickly set in wire grass as any land I ever saw. The season was a good one for oats—but the crop on this ground was a failure. It was evident that the oats were destroyed by the wire grass. I determined at once to make some experiment towards ridding the land of this terrible pest. It occurred to me that if the land was kept constantly employed, during the whole vegetation and growing season of the year in crops that would entirely shade the ground and for the time, prevent this grass growing up that it would in a few years perish out. Accordingly, as soon as I reaped the oats, I ploughed the land, and sowed it thickly in peas. The crop of peas was a different one for the land. The vines remained on the ground—and during the next winter it was ploughed, preparatory for oats in the spring. At this ploughing, I perceived that the wire grass had very considerably diminished.

In the spring I again sowed the lot in oats. The season was not very good here for oats. However, the crop was more than double what it was the previous year. Immediately after cutting the oats, I again ploughed the land, and put it again in peas, sowing them thick, more than a bushel to the acre. The vines were, as was again sowed in oats, and in an ordinary season there produced, I think, as heavy a crop as I ever saw grown upon high land. During all this time there was no manure of any kind applied. That fall I sold the land. I learn from the present owner, Judge Scarborough that the lot has been since cultivated in various crops—corn, potatoes, turnips, &c. Yesterday I went with Judge S. to see the ground. We examined, and found almost no wire grass on it—certainly very little. A portion is in clover, which is very fine. A portion, a belt about 37 feet wide running through the ground, had recently been ploughed. Here we had a fair opportunity of seeing whether there was much, or any wire grass still in the land. We saw not more than three or four spires and roots in the whole ploughing.

"From this experiment it would seem that two successive crops of both oats and peas, requiring only two years, will entirely eradicate this horrible bane to all small green crops."

Remarks by E. R.—I hasten to publish the foregoing experiment, in advance of other minutes of facts or other subjects collected, that this trial may be repeated by others, as soon as possible. This may be done for the present year, by any farmer who has any thickly set wire grass ground now sown either in oats or wheat. For the beginning of the course, I incline to the belief that wheat would be a better growth than oats, for the object in view; as wheat would have earlier and more complete possession of the ground, and will better withstand the injurious growth of the wire grass. I know too that peas immediately following wheat tends much to restrain the growth of thickly set wire grass—and this of course has been used for that purpose with good effect by Edmund Ruffin, Jr., of Prince George county. I have not known (on such land) a second crop of either wheat or oats to be followed immediately by another course of peas as in Judge Christian's trial—and therefore no such complete destruction of the growth of wire grass was obtained by the shorter and less perfect course of wheat, peas, wheat. If by this course, wire grass can be even prevented being a serious obstruction to tillage for ten years thereafter, it will be an immense advantage of the agriculture of lower Virginia.

Plum Trees.

A correspondent of the Country Gentleman says:—"I attribute my success mainly to an hereditary strain of Yankee principle, producing a strong propensity to use a jackknife. My trees are mostly grafted on to suckers of the native or wild plum near, or at the surface of the ground. The scions take well in such stocks, and grow strong, frequently from four to seven feet in a season. In the spring of the first year, I cut back to two or two and half feet and each spring following, from $\frac{1}{2}$ to $\frac{3}{4}$ of the last year's growth. This causes them to grow stocky, with low, bushy heads, and to set thickly with fruit spurs. I have trees in different varieties of soil; some in cultivated, some in grass land. All do well. I manure with what is most convenient, without regard to kind or quality, long or short, stable or hog manure, ashes, old lime, soap-suds, fish-brine, chip-manure, or whatever is at hand, plowed in or for top dressing.

The great enemy of the plum-tree is black-knot. Now comes the grand question—Black-knot, what is it? Is it a disease, or the work of an insect? I will endeavor to answer these questions according to my observations. I consider it to be the work of an insect, with which I have no personal acquaintance except in the maggot state.

From frequent observation combined with practice, I find that June is the time to look for the enemy. There are no black knots then, of this year's growth, but simply swelling upon the branches. Now use your jack-knife, and you are sure of your foe. When these swellings first commence, so as easily to be found, the insect is of the exact color of the excrescence, and so small as usually to escape detection. Nevertheless he is there. From the middle of

June to the first of July, they are easily found, generally two in a knot, varying from 1-20 to 3-8 of an inch in length—the largest in the mean time are leaving their cells. I have found them near by, sheltered by the rough bark, covering themselves with a thin, silk-like web. To all who wish to raise plums, (and who do not?) I would say, here lies the secret. Cut green knots instead of black ones. By following this practice, I have succeeded in raising very fine trees—not a black knot is ever seen on them. A swelling is occasionally found, but it is taken in time to secure the maggot. By this means, the insects are reduced to that degree that my trees never suffer thereby. I have trees from four to six years from the graft, from eight to ten feet high, with large, spreading heads, bearing the first season from one to more than two bushels per tree, of most splendid fruit, as many a satiated appetite can testify."

Collect Manure for the next Years Crop.

The cultivation of the hoed crops has now been completed, and we hope that the farmers will turn their attention to collecting materials for composing manure for the next years crop. The means for making manure are in some form or another within the reach of all, let their location be where it may. The farmers in the eastern part of the State have in many places rich marl beds and large quantities of valuable muck in their swamps, which when properly composted with stable or barnyard manure are highly valuable. The marl and mud are also used in connection with cotton seed in which way a very large quantity of the fertilizing properties of the cotton seed are saved. In such parts of the State where these substances do not exist, the same elements are to be found in some other substances. If the farmer has not got marl and muck, he should burn ashes from which he not only derives, lime, but other valuable elements besides, which are highly necessary to the growth of the crop he cultivates. In order to burn ashes profitably, we would remark that the heaps or piles of wood should be small so as not to create so much heat as to destroy a goodly part of the ash. The ashes should be used shortly after they are burnt, before the rain is allowed to fall upon them and deprive them of the soluble salt of which they contain so large a quantity. They should be composted with the marl or scrapings from the woods, ditches, and fences, and also with stable manure at the rate of fifteen or twenty bushels to the acre of land. The farmer should also keep his stable and barnyard well filled with muck and mould for absorbing the ammonia arising from the manure. Then manure from the fowl yard should receive the attention it deserves, it should be composted with ashes and plaster, which makes a manure but very little inferior to guano. The muck pile should be constantly kept well supplied with muck and all the drainings of meat, and the refuse parts of vegetables and the soap suds from washing clothes, should be thrown upon it. This is a most excellent manure for the garden, besides preventing the loss of a large number of ducks and chickens

while young, which is so often caused by their drinking the salt water which after the meat is washed in the kitchen, is usually thrown out at the door. These are some of the many means of making manure which our farmers have near at hand and can by reading and study learn properly to apply them. This is the time to begin to make manure for next year's crop, and all farmers would find it much to their advantage to begin early and make as much as they can. If a farmer waits to get time to make manure he will never make much—he must make it a regular business as much so as the tilling of his crops, when they require it. Recollect that it does not require as much labor to cultivate rich land as it does that which is poor, to say nothing of the enjoyment that is derived from looking upon a luxuriant crop. Let every farmer resolve that he will not till poor land and only cultivate so much as he can manure, and if he will not have a regular manuring force, such as we have often recommended, he had better hire his hands out and sell the team which he would require to cultivate this land which he knows will not pay the expenses of cultivation. Practice makes perfect in manuring as it does in other things, a man will find that year after year he will increase the quantity of manure upon his farm without any addition of time or force.

From the New England Farmer.
Circumstances Alter Cases.

BY HENRY F. FRENCH.

An Agricultural Discussion among Legislators—Profound Views of one of them—Two Ways of learning Agriculture—A little Learning is a dangerous Thing—Use of Mathematics in Agriculture, illustrated—Science is simply the observation of God, at Work—The Life Principle—Men of Education needed—Experiments Frustrated.

Three or four years ago there was a discussion one evening in the hall of the House of Representatives at Concord, New Hampshire at a meeting called by the friends of agricultural progress, for the purpose of impressing the members of the General Court, if possible, with the idea that the State ought to do something in aid of the farming interest, by way of pecuniary assistance to the agricultural societies, or otherwise. One would suppose that this would be no difficult task, especially as the constitution of the State expressly provides that—"It shall be the duty of the legislators and magistrates to encourage private and public institutions, rewards and immunities for the promotion of agriculture," but as the lawyers say in their bills in chancery, "the country thereof is true." I well remember the argument of one highly respectable gentlemen, who evidently consider it his duty to make a speech against these new notions about scientific agriculture. The fact is, said he, that there is no dependence to be put upon those men who talk about scientific agriculture and agricultural chemistry. They don't agree among themselves, and if you undertake to follow their advice, you will find no two of them to advise alike. One of them will tell you to plow in all your manure green

and another to compost it all before it is applied; one will tell you that you must put the manure into the ground a foot deep, because the best part of it rises and so escapes, while another informs us that the manure sinks, and goes off into the ground, and so we had better leave it near the surface. One chemist tells us there is nothing so good as lime for our land, and another warns us not to mix lime with our manure heaps, because it will spoil the whole. And so our worthy legislator proceeded to show up the absurdity of these new light teachers of husbandry.

Now this is not a very unusual style of argument, and it is very hard to meet. The fact is, that the man was so far off from any appreciation of the truth that nobody could go far enough back to get round him! There are two ways of learning agriculture, as there are of learning music. The one is by rote, the other by understanding its principles. A person may learn a particular tune, perhaps as well by the former as by the latter method, but this will not help him to sing or play a new sheet of music. And so in husbandry. A man may see his grandfather and father carry on the homestead, and by treading in their footsteps, may bring about results as satisfactory as theirs, on the same farm with the same crops. But place him on a new farm, or let him undertake to raise new crops on the homestead, with no knowledge of principles, and nobody can tell whether the product will be Yankee Doodle or Old Hundred.

There is truth in the poet's saying,

"A little learning is a dangerous thing."

A man is much safer to be literally a know-nothing in agriculture, than he is when he has got a glimpse of two or three ideas, with no sufficient knowledge to guide him in their application. Many men have a strong propensity to mathematical reasoning—to work out their propositions by the single rule of three direct. Thus, if a half ounce of guano to the hill, will add twenty bushels of corn to the acre to my crop, how much will a quarter of a pound to the hill add to it?

Now the corn and the arithmetic will not be likely to come out, exactly alike; indeed, the corn, probably, will never come out, at all.

The farmer, who tried salt as a manure for potatoes, by putting half a pint in a hill, was probably disgusted with scientific farming forever. Had he put the same quantity into his soup for dinner, he would have had a parallel case.

We, in New England, need education in the Principles of Agriculture, to do our work properly. On the new and fertile soil of the West, only brute force is requisite to produce a crop. Cut off the timber and burn it, or break up the prairie sod and put in the seed, and the crop will come. But, the skinning process has been finished here, and we can get from the earth only what we first give it, or induce the elements to render up to its use. The temper of our good mother Earth is worn out, and she will no longer deal with us on terms, which place "the reciprocity all on one side."

We can no longer have our music by turning the crank of a hand organ, but we must learn skilfully to touch the keys, or we shall reap only discords. The philosopher in the story, who believed that all things came by chance, and sought to make for himself a wife by mixing all the elements which enter into the composition of a human body, and putting them into a cask, which diligently rotated daily, till the particles should happen to come into their proper relations to each other to produce the lovely object of his desire, never succeeded, that I have heard of, in finding the lady, by that process.

A farmer, who supposes that he will chance to hit on the laws that govern the principles of vegetable production and growth, by acting on some one scientific idea that he has fallen upon, in total ignorance of every other law of nature, has scarcely less absurdity to answer for than the philosopher in search of a wife. It is much to learn the bounds of knowledge, so as not to waste our efforts on things beyond human reach. The essential *Life Principle* is beyond the grasp of human knowledge. How the dead differ from living. He alone knows who gave life. Philosopher and chemist are both at fault here. They may analyze the dead but not the living. The vast, the Heaven-wide difference between the living and the dead no man can define. And this is equally true of vegetable, as of animal nature. The grain of corn, or the blade of grass, which we carefully examine in the laboratory, is not that which receives our care in the field—which drew up its nourishment from the soil, selecting thence the honey from the poison—which absorbs from the dew and the rain and from the sunlight even, the elements of its being, which gave form and color and distinctive qualities. *This* is a dead plant. *That* was a living creature, with a soul-like instinct, which directed the germ in the sod to strive upward for light, which governed it, in its growth, in choosing from the infinity around it, those elements suitable for this and no other living thing, which made it in the midst of various others, growing so diversely side by side with it, so unlike them all and yet so unerringly true to its type, so exactly in form and essence, to its own species, scattered far and wide over the earth.

In this view, we are tempted to say, that agricultural science must rest only on experiment. Doubtless the carefully conducted experiments, with their well-observed result, by persons competent to observe and appreciate the means used, the conditions of soil, and climate and treatment, are the most reliable and satisfactory of our guides for the future. The difficulty, however, is having experiments thus conducted and the results noted and compared. The chemist may, and does, accurately analyze the soil. That is dead matter. It is the same in the laboratory and in the field. He can tell you whether one soil is like another, or how they differ. He can analyze the fertilizing agent, and give you their comparative richness in certain elements admitted to be valuable. He could have told our friend in the General Court, which of the valuable properties of ma-

nures are likely to sink into the earth, and which to escape by evaporation into the air, and what soil is most tenacious of these properties. Then we men of education to note down and compare results when obtained.

Probably three-quarters of the experiments commenced each spring fail entirely from want of system, or knowledge, in some person on the farm. You plant some select dozen of potatoes, procured with great care and cost, and in your absence, your boy who does the chores digs them all for dinner, some day. You have a few hills of some new and valuable variety of corn, and tell your Irish man, recently imported, to cut the stalks; and before you know it, he cuts it all up at the roots, and the cows have had it for supper.

And, finally, when some experiment has been carefully watched through the whole season by yourself personally, the crop is gathered by some enterprising "hired man" who wanted to do some surprising act of energy in your absence, and when you eagerly inquire of the results, he has them so thoroughly mixed up in his head, that he gives you the same valuable information that the woman did about the indigo; said she, "If you want to know whether it is good or not just put a little piece in water and if it is good, it will—either sink or swim, I declare I can't tell which!"

To illustrate the necessity of knowing enough to see both sides of a proposition, and to show how "circumstances alter cases," in farming as in everything else, I have noted several topics. Among them is the subject of the application of manures, and therein, of composting, the subject of deep plowing, and that of digging about fruit trees. On all these topics, there are different notions; arising mainly from the differences in soil and locality, which may be profitably examined with a view to reconciling or refuting them.

In a future number, having faith—though the snow lies deep around, and the glass is at zero—that seed and harvest will not fail, I hope to discuss these matters with more minuteness.

Setting out Trees.

On the open of early spring, a large proportion of our readers are particularly interested in any plain, simple directions as to the best manner of setting out trees, and especially so, where in that way common and fatal errors are easily avoided. Let us therefore suggest:

1.—Do not set them too deep. This is the secret of the grand discovery of the great law of vegetation for which Russell Comstock asked the small sum of one hundred and fifty thousand dollars, viz:

"That the 'seat of life' in a tree or plant is just at the point where the earth should cease to cover the foot of the tree. If covered deeper, it strangled the tree at said seat of life, or forced it into sending forth suckers, which stifled all healthy progress in the tree."

Now the discovery is not a new one, that trees must not be too deeply planted; certainly no deeper than they were, when growing in the earth previously. Without doubt, thousands of

dollars worth of trees are annually lost to our country by this simple error.

2.—Put nothing but pure and finely pulverized earth around the roots. Many persons are told their land wants manure, ashes, &c., and not having time to manure and ash their whole field, they, as a substitute, put these substances into the hole for the tree, and mingle it in the earth with which they cover the roots. This is all wrong. The soil may need manure and ashes, but these should be completely composted in the soil before allowed to come in contact with the fibrous root of the young trees.

3.—Mulch the tree well after setting out. Mulching consists in placing the manure—be it new or old—leaves, tan-bark or whatever is used loosely on the surface of the ground for a considerable space around the tree. On no account mix it with the soil in transplanting.

4.—The first step, and most important in preparing for a fruit yard, is thoroughly to drain the soil. The tree cannot be healthy and vigorous without this.

5.—Take care of the tree after setting it out. Many persons do not bestow as much labor on a tree which ought in ten years to yield an income of ten dollars per annum, as they do on a half dozen hills of potatoes. They do not seem to be aware how great the difference is between the quantity and quality of the fruit on a kindly treated, well-fed, tree, and that of one half starved and dwarfed. Let it be always remembered, that whatever is worth doing at all is always worth doing well.—*The Agriculturist*.

Kidney Worm in Swine.

John K. Warren writes, 'I am desirous of obtaining information regarding the Kidney Worm in Swine: symptoms, cause and proper treatment—and of worms generally in that kind of stock. Can your readers inform me how to treat the scurf that appears upon the skin especially of the back of the Suffolk breed, supposed to be 'mange,' but I now think it the effect of cold weather.'

KIDNEY WORMS.—Cole in his 'Diseases of animals,' says: 'This disease is indicated by weakness about the loins.' It will also exhibit itself in inability to use its limbs—sometimes one fore leg will refuse to do its duty—sometimes both hind legs are powerless.

REMEDY.—The above named author says:—'Corn soaked in lye of wood ashes, perseveringly used, has cured in many cases. Another writer says, 'this may do in recent and slight affections; but a more certain treatment, is to make an incision about an inch long, on each side of the back bone over the kidney and after separating the skin slightly from the parts beneath, insert two or three cloves of garlic. Take a stitch to confine the garlic. Dr. Holms of the "Maine Farmer" thinks pieces of onion or garget root would do as well.

A writer in the "Southern Cultivator" says, to effect a cure requires nothing but a free use of copperas dissolved in water and mixed with meal so as to form a dough. It will require some six or eight doses to cure a hog after he has got down. All farmers should give this

to their hogs several times in the spring of the year—in fact it is good for them occasionally through the year." The same writer says:—'Copperas will destroy the large worm frequently found in the bowels of a hog as well as those in the kidneys. One ounce or less is enough in any case. Sulphur is also good for hogs, and enough of it will make them shed lice if they have any, and may be given without any risk of danger.'

Another remedy for 'kidney worms,' we have seen, is to place the hog on its back and tramp its bowels across the kidneys. Another, gash the hog on the back and fill the cuts with salt; another has cured the disease by making an incision over the kidneys near the spine, about four inches long and something over an inch deep, filled it with pods of red pepper and then sewing it up. Another, by putting spirits of turpentine on their backs just over the kidneys, and repeating the application once or twice if necessary. Has never known it to fail. This is more humane. Another, in the "Ohio Cultivator" is, 'to give the animal afflicted one ounce copperas daily for six or eight days. Make a slop of about two quarts of corn meal and dish-water; dissolve the above quantity of copperas in a tea-cup of warm water and mix the whole together. Then give it to the hog.' The disease, of several months standing, has been cured in this way.

WORMS IN THE INTESTINES.—Youatt says; 'the presence of worms may be inferred when the animal eats voraciously and continues lean and out of condition, coughs, runs restlessly about, uttering squeaks of pain, becomes savage. The excrements are generally hard and highly colored, the eyes sunken. The animal becomes debilitated, and has frequent attacks resembling cholera, which tends to weaken him. Too often dies; for before these symptoms have been noticed the evil has generally attained such a height as to be beyond the power of medicine; for these parasites multiply with incredible rapidity.

REMEDIES.—Drastic purgatives constitute the most efficient means of combating worms; but they must be cautiously administered, as they are but too apt to dissolve and force away the living mucus of the intestinal canals. Turpentine is exceedingly destructive to worms, and although to many of our domesticated animals a dangerous medicine, it may be administered with perfect safety to the hog. Common salt may be given with advantage, and should be mingled with the food. Nor must it be supposed that because no worms are seen to come away from the animal the nutriment may be discontinued, or that there are none; hundreds of them die in the intestines, and there become digested and decomposed, and go through the same process as the food."—*Prairie Farmer*.

Potato Bread.—Boil and peel a dozen mealy potatoes; rub them through a sieve; mix them thoroughly with twice the quantity of flour or meal; add sufficient water to make dough of ordinary consistence; ferment in the usual way with hop, potato or pea yeast and bake in rather a hot oven.

Chinese Sugar Cane---Its Manufacture, Etc.

This new plant is exciting great interest; and its value for a crop seems to be admitted by all who have grown it. From experiments made in the laboratory of Prof. Booth, of Philadelphia, by Dr. Battie, it is admitted that its concentrated juice will yield crystallizable sugar. The various products which have been produced from the plant, and which we have before published as translations from the French by Mr. Olcott, increase the probable value of the plant. It seems to flourish not only in the Southern and Middle States, but equally well in the West, East and North. All admit that sugar may be profitably made from the Sorgho in the southern states; this we cannot doubt. But it becomes a question whether it can be profitably pursued in the large way in the latitude of New York. The cost of apparatus for a sugar estate is very great, and this cost must increase in proportion to the length of the sugar-making season. In the extreme south, where they have sixteen weeks for sugar-making, they would require but one-sixteenth the amount of apparatus that would be called for to manufacture the same amount of sugar where the season was but for a single week. The cane ripens too late in this latitude to leave a long season before frosts; and therefore we fear that its manufacture will be confined to small operations. This, however, will not interfere with the making of sugar on each farm to an extent equal to the requirement of the grower and his family. The experiments thus far made by growers of the Sorgho, have simply been to concentrate the juices to a syrup, or molasses; and we have seen none where crystallizable sugar has been produced. Dr. Battie has stated, however, that he did produce crystallizable sugar by careful manipulation; and we therefore take it for granted that when treated like other cane-juice, it will yield similar results. Supposing this to be true, we now propose to give the necessary directions for sugar-making in the small way. Many differences will be found necessary as compared with the processes now in use on large sugar-estates, by sugar refiners, etc. But we see no difficulty, admitting the power of crystallization to be equal to that of the cane, in every farmer's manufacturing white or brown sugar, as he may desire, and a quality of molasses entirely superior to any of the samples produced by the crude means which have as yet been resorted to.

In the cutting of the cane it should be remembered that no unripe cane should be made use of for sugar-making, as the juice from this will not only refuse to crystallize, but will also prevent the crystallization of a juice of better quality with which it may be mixed. The grinding or expression of the juice must occur soon after cutting, as the exposed or cut ends soon become sour; and, indeed, long before it can be detected by the taste, some acetic acid will be formed; and this is detrimental, not only to the power of crystallization, but materially injures the quality of the product. The mill used for expressing the juice from the canes must

be formed of three rollers, and not of two, as has so frequently been recommended. Long experience has proved this arrangement to be necessary, to be able to press out all the available juice, and to leave the *bragasse* in such a condition as to be readily dried. In the West Indies, and in Louisiana, this *bragasse* is used as fuel; but we cannot but hope that with the Sorgho it may be used as fodder for cattle, even after having passed the mill, as the acetifying process is evidently not so rapid as with the sugar-cane. Still we do not believe that the cut cane can be retained for a length of time before use, and then its juice expressed, and still retain its power to crystallize. As the juice runs from the mill, it should be conducted to the clarifiers through closed and not open gutters, so as to prevent, as far as practicable, its contact with the atmosphere. The reasons for this may be readily understood by a simple experiment. If cane-juice be churned for a few hours, it refuses to crystallize altogether, and its product will be simple molasses. And this arises from its admixture with atmosphere and the consequent taking up of oxygen during the process of churning. This fact will be true, in degree, from all exposure or admixture with atmosphere; and therefore closed gutters should be used. There are many means of clarifying juice. We should recommend either of the following:—

1. The clarifier should be so arranged with a damper between its bottom and the fire, as to enable the operator entirely to control the rapidity of the action. If the juice is at all acid, a very small quantity of the cream of lime may be added; and experience must show at what time this had better be applied. Albumen in any form may be used as a clarifying agent.—Skimmed milk, the white of eggs, or blood, divided through the mass, will answer the purpose. During the process of clarification, the juice should not be permitted to boil, but simply to simmer. This will cause a scum to rise to the surface, which, after it is aggregated so as to cover the top, and has settled to toughness, may be removed by a ladle pierced with small holes. When it ceases to throw up a scum, the concentration may then go on till the temperature rises, by parting with water, to 225° Fahrenheit. During this concentration, and after the removal of the scum, the ebullition should be rapid, for slow boiling toughens sugar, and prevents crystallization, causing an eventual large yield of molasses and a small return of sugar. On arriving at 225° as the boiling point, the contents of the clarifier should be passed to the concentrator when no filtration is appealed to, and there finished, as shall be afterwards directed.

2. The juice may be boiled so as to part with a large amount of its water, by simply adding a small amount of the cream of lime before being clarified. It should then be received in the clarifier, and there may be added the albumen mixed with a small quantity of cold liquor from previous clarifications, and a quantity of fresh burned, and finely ground bone black. This will not only remove a large portion of the color, but will take away the peculiar taste and

color of the juice, causing it to resemble the flavor of a solution of loaf sugar, rather than that of cane juice. When the bone-black is used in clarifying, it will rise to the surface in a thick slum, bringing with it all matters held in mechanical suspension in the fluid, as well as portions of wax, fecula, etc., separated by the operation. The whole quantity should then pass into a filter, which will retain the bone-black and the other coagulated foreign matters, and deliver the clean liquor ready for the concentrator.

CONCENTRATION.—The clarified liquor from either of the above processes should be boiled over a rapid fire, until so much water is parted with as will cause the thermometer immersed in the mass to rise to 210° . At this point it should be discharged into the cooler. There are various methods of arriving at the proof point, as it is technically termed, or point at which sugar is supposed to be finished in the concentrator. Some insert a ladle, and then by blowing suddenly against it with the mouth, the concentrated syrup is thrown out opposite each hole of the ladle in a little globule, the size of which decides when the proof-point has been attained; others insert a cold stick into the syrup, take a small quantity on the thumb, touch it and link it with the middle finger, and the length of the thread thus drawn out, and the manner of the curl of its point when broken, decide the proof-point. But an ordinary sugar house or gun-barrel thermometer inserted in the concentrator, is much the better implement to be used by the inexperienced manipulator, as the point of concentration at similar temperatures must always be equal, being decided by the amount of water evaporated from the mass. After the concentrated syrup is received in the cooler, it should be permitted to remain at rest until a slight crust of sugar is formed upon the side and bottom; this should then be scraped off by a wooden spatula, and the mass stirred until homogeneous. By this time a second charge will be ready from the concentrator, which should be similarly treated; and after the third charge is received, the filling may be supposed to be complete. From the cooler then it is transported into the moulds, which hold about 80 lbs. apiece. In a short time the inner surface of the mould will be covered with a coating of sugar tar or taffi.—This should be scraped off by the up and down action of a wooden sword or hauling-knife, as it is technically termed, with a flat chisel-like end, and stirred in the mass. This should be repeated twice during the cooling of the mould. The next morning it will be found to be solid. The stop should then be removed from the point or nose of the mould, and it should then be placed upon the dripping pot and stood in a warm situation; the syrup occupying the spaces between the crystals in the mould will slowly pass out at this opening into the pot beneath, leaving the sugar dry and of a brown color. This may occupy more or less time, entirely depending on the warmth of the atmosphere surrounding it. If it is only desirable to make brown sugar, here the process ends, and the syrup which is run into the pot may be us-

ed as molasses. The sugar may be removed from the moulds, and the wet ends or noses of the bastard moulds may be placed in a manner to purge themselves of their excess of syrup.—If, however, it is desirable to improve the quality of the sugar, it may be done while in the mould.

It will be remembered that the coloring matter of sugar is always resident upon the surface of its crystals, and does not imbue their mass; therefore after the green syrups have run and the loaf is supposed to be dry, or nearly so, the upper surface of the sugar to the depth of one inch may be scraped off and mixed with a small quantity of water to the consistency of thick cream. This may be poured back on top the mould, and the mould replaced upon the pot. The aqueous portions of this magma will slowly pass down between the crystals, removing the coloring matter from their surfaces in part, and deposit itself in the pot below. This kind of syrup is called seconds, and after it has all run, leaves the sugar brightened in color. If it is desired to make the loaf white, a white syrup, made from loaf sugar, being a fully saturated solution, should be added on top the mould, stirring and mixing with it the loose sugar from the magma. This in passing down through the mould will remove the color, leaving the crystals white, and without materially lessening the weight, as it takes up coloring matter and deposits sugar of a finer quality previously held in solution. This process of liquoring may be repeated two or three, or even four times, if necessary, until the loaf is whitened to the extreme end. After having set a sufficient time to have run all its syrups, the last of which is called drips, it may be removed from the mould and dried, or baked in a temperature not exceeding 140° . This will be what is usually termed loaf sugar. If removed from the mould after the first liquoring, the large end will be found to be white, the middle straw color, and the small end brown sugar; after the second liquoring the proportion of white and straw colored sugars will be increased, and that of grown sugar lessened. These syrups, called seconds and drips, may be thrown back into the concentrator with new charges, and a second crop of sugar obtained from them; always, however, of an inferior quality. If the drips alone be thrown back, they will produce a sugar equal in quality to that from which they came. The different pieces of apparatus necessary, their form, cost, mode of setting, etc., we shall give in a future number, with wood cuts. One of our largest coppersmiths, Messrs. John W. Reid & Co., of No. 11 Old Ship, is now manufacturing for us a small apparatus, with a view of ascertaining its cost, etc.—[ED. WORKING FARMER.]

For the Farmer and Planter.
Cotton in Mississippi.

MR. EDITOR:—Your June No. is at hand. I am not so punctilious as to require any marked attention, and unless a desire to offend, and a determination so to do on the part of another,

I am not apt to take offence and "cut" an acquaintance.

You remark—"We are not much in favor of encouraging the production of cotton, to the great neglect of other more important crops," &c.

Pray, my friend, who will admit he is? Most assuredly I will not, and I think I can with safety, refer to any and every article from my pen, from the 12th of November, 1832, to this date. So far from it, had I the government of this State to rule as a dictator, I should put on bread and water for days or more, any planter who did not make, at the least, all supplies, unless a proper reason was assigned. And I am rather at a loss, to know why you should just then think of that remark.* Cotton must be made, men will plant all the cotton they can cultivate; in Carolina there are thousands of acres now planted for about 4 or 500 lbs. of seed cotton per acre, which yields about 23 lbs. to the cwt.

I am not ordinarily desirous for my brother Carolinians to leave that old State, but at present, when the South needs every appliance, when cotton seems to command more influence than ever, when so many negroes are wasting their energies on 2 or 3 bales per hand, when I know as good lands as man ever worked, can be bought at the price of your worn lands, when I see so much influence is lost to us and so much to be gained by removal, I must, as a patriot, desire it, and as a philanthropist to use all laudable means to bring it about.

My friend, Dr. Wm. L. Baffon, recently departed this life, assured me he had made 1100 bales with 60 hands, and for a series of years had averaged 15 bales—that is, 120 bales made in the 8 years he had settled in the swamp.—This is an extraordinary yield, few have equalled it, though that has even been beaten. I have made on this place, 8 bales per hand, and selling corn, meat, &c., &c., yearly, at the same time making all my improvements with the same hands, and those improvements not a very small matter—some 50 acres of orchard, with fancy hedges, &c., to make symmetry.

But my policy will lead to larger supplies.—Concentrate cotton planters enough to cultivate five million of bales on the rich bottom lands of Mississippi, Arkansas and Louisiana,

*It was only the expression of our sentiments, friend P., long held and not by any means a new idea, nor was it a fling at any one, especially yourself, to whom it would least apply. It might well be applied, however, in our own State, where thousands of acres are put in cotton, that do not exceed 300 pounds in the seed, and not enough of provision crops at that.—ED. F. & P.

and those upon the same character in Alabama and Texas to remain, when we can readily supply 4 or 5 million of bales, and force the thin land planters to grain and stock. Why sir, in your district, you should devote every acre, woodland and cleared land, to stock and grain, reducing workers to a proper standard.

Please, for a moment, let us look to statistics, not to make any invidious comparison, but to show the expense you are at.

Anderson District has—

Improved lands, 178,455 acres—only 13,135 sheep.
Unimproved, 282,495 "
A population of... 21,475
Compos'd of whites
and free color-
ed, 23,961
Slaves 7,514,—6570 bales of cotton.

Hinds Co., Mississippi, with one city, Jackson; 2 respectable towns of 1 horse power and several cross road, aucuses named towns,

Has a population of..... 25,310
Composed of white and colored. 8,715
Slaves, 16,625 & 19,829 bales.
Improved land, 164,457
Unimproved, 276,966

Deduct our town negroes, not less than 2000, and we have near 15000 for plantations, including all ages, say $\frac{1}{2}$ available and this Co., poor as it averages, sends near 4 bales. Make a fair deduction in years and add whites who make cotton, and you average not 2 bales. Our average is small, this Co. has a large number of non laboring negroes. More anon. P.

P. S Permit me to add: In Jackson resides all our State officers, many lawyers, or besides in Reymond, the County seat, there are the County officers, with large boarding schools in Jackson, Clinton and Reymond, all of which require a large number of servants.

But I assume 4 bales as a full average and at yours at 2, thus a difference of 100 per ct., besides the expense in getting to market—and the quality is another large per cent. Now, if you made no cotton, and would grow grain and raise stock, you would double your income and leave the richer parts to make those 6000 bales with at least half the hands, and your keeping half will do you. P.

For the Farmer and Planter.
Salmagundi.

MR. EDITOR:—No disposition to annoy the Executive Committee of the South Carolina State Agricultural Society, or mere love of fault-finding, actuated me in penning my former communication. A deep feeling of devotion to the welfare and success of our Society, induced me to examine the Premium List for 1857, and I sent you the thoughts in part, that,

that examination excited. The Executive Committee are engaged in a noble patriotic cause, and I presume are devoting themselves to it laboriously and conscientiously, but they are only the agents and representatives of the Society, and I hold that it is not only the privilege, but it is the duty of every member who has opinions to offer them, for the good of the whole and let them receive such consideration as they deserve. Truth and right have nothing to fear from free discussion.

Your correspondent, "Hotch Potch," very much misunderstands my meaning, whether it is my fault or his, your readers must determine each for himself. My idea, was not to exclude any of the improved breeds of domestic animals, but to adopt a different classification from the one that our Committee have adopted, and the one that has been, and now is, in vogue, so far as I am informed, in all the agricultural societies in the country. I think the present system has about accomplished its mission, and that it is time to look about and see if we cannot "progress" to some advantage. If I understand myself, what I would propose is, an advance, not a retreat or falling back. In my last, I simply, as well as I recollect, objected to the present system; now I will attempt the outline of a system which, it seems to me, would render existing circumstances, more likely to secure a higher degree of improvement, than the old one that is now becoming effete.

Cattle, of whatever breed, are raised principally for milk and its products, beef hides and for work; therefore, I would make these the basis of classification. Let the premiums be offered for the various grades of milking qualities, as first, second, third, and so on as far as the funds of the Society will justify, and the merits of the milkers be determined by actual experiments. The competitors being required to report the size of the cow, the quality and value of the feed used, quantity of milk yielded in a given time, and its quality as to richness, &c., &c., including all the information necessary to understand the value of the cow as a milk producing animal. In this arrangement, there would be no exclusion, animals of every breed would stand on an equality. The prize being bestowed on *merit alone*, as far as it could be ascertained. It is presumed that "blood and form" would tell in a contest like this, but if "dun mooly" was the victor, it would be because she deserved it, and I, for one, would say, let her enjoy the well deserved honor.

The other two classes, one for beef and hides, and the other for work, I would have arranged on similar principles, for the improvement I wish to see the State Society effect in cattle raising is, that which will secure the largest return for a given amount of labor, capital and care.

In my effort to concentrate my thoughts in as few words as possible and to avoid the repetition of the phrase given "set of circumstances." I used the words "set of surroundings," which it seems you did not understand, and your correspondent plays upon. I will therefore try to make my meaning more obvious.—In any given locality, whether mountain or seaboard or elsewhere, when the climate, soil, prices of food or pasturage, prices of milk, butter, beef, hides or work, &c., &c., are considered the family of cattle that will yield the largest income from a fixed amount of labor, capital and care, is the one constituting the greatest improvement for that particular locality. I have, therefore, no doubt that Devons are best in one place, Durhams in another, Ayreshires in another, and so on, for all these families differ very materially from one another. The animal best suited to the seaboard, is not likely to be also best for the mountain side, nor is the one best suited to the rich lands of Newberry or Abbeville District, suited to the pine woods of the lower country, and therefore, instead of offering premiums for the animal ascertained to be the best in a particular county in England or Scotland, I would prefer that our Premium List be so arranged as to ascertain what are the animals best suited to the localities in South Carolina. If these sentiments entitle me to a place in "secret fancying family," be it so.

I have no "dread" of a Brahmin, "mortal" or otherwise, but I do believe that "humbug" has done much to retard agricultural improvement and will do what my poor ability may enable me to prevent as far as possible, the action of our Society, encouraging wild speculation in *new things*, instead of substantial and useful improvement.

What I have to say respecting the arrangement of premiums for other domestic animals, must be deferred until some future time, for this article is growing to such length, that otherwise, I shall have my dish full without containing the variety my caption promises.

Your correspondent's fling of the "*argumentum ad hominem*," is entirely wide of the mark. I have not now, and never have had one sevenpence worth of property in a "Morgan" or "Ca-

nadian" horse, and therefore all the fine flourish about "Skew Ball," "White Stocking scrubs" is wasted.

If "Hotch Potch" will pay me a visit in the "surroundings" of "Potts Cove," I will treat him to the sight of our respectable "full blood" stallion, a creditable, "full blood" North Devon Bull, (and he not blind;) some Berkshire and Chester County hogs and their crosses—some Leicester sheep and their crosses, &c., &c., down to some of the crosses of the "Cashmere" Goat, by the "Cashmere," is a shifty as well as war-like, for he can find every thing that is to eat that is left out of doors, fence or no fence, and when things more savory give out, he can finish his meal on apple tree bark. After the visit, I will return with Hotch Potch to his place and witness the pleasure all the patriotic efforts he has made to introduce into his District the improved animals which he values so highly.

Regarding the premiums for field crops, I would observe that the competition should be made as wide as possible and the arrangement made with a view of eliciting the largest amount of instruction, at the same time putting all competitors on an equality as near as may be. The culture of one acre of wheat may be as *importantly instructive* as that of piety. Then, why offer *thirty dollar* premiums for the best fifty acres of wheat, when there can be but a few wealthy men competitors, and only ten dollars for one acre when every body may compete for that? The wealthy man may enter the lists for the one or two acre premiums with decided advantages over the man of moderate or middling means, and then have set apart for the use of his class, a premium worth both, the other class of competitors is excluded from.

I see some of the Life-Members entertain the *strange* idea that the Executive Committee ought to furnish the Farmer and Planter free of charge because they are Life-Members. Really, this is an age of progress! The Committee have the use of the interest on \$25 annually, which amounts to just \$1.75; for this sum they must have one dollars worth of newspapers, one dollar and seventy-five cents of privilege to the Fair Grounds, and a right to compete for all the Premiums of the Society. Pretty good speculation, but not quite as good as subscribing in November, 1855, having the Agriculturist to read all 1856, the privilege of the Fair Grounds in 1856, and the right to compete for premiums in 1856, and keep the \$25 in their pockets until show day, and then pay it without interest.

Touching the powers of the Executive Committee, I only mean to give it as my opinion, that when a Committee of judges unanimously agree to withhold a premium under the rule that the animal does not deserve it, the Executive Committee ought not to over rule the decision and award the premium, though the animal may belong to one of the Committee.

Most respectfully, RIGMAROLE:
Potts Cove.

For the Farmer and Planter.
That Field of Clover, &c.

MR. EDITOR:—I rejoice to know that so many noble spirits have, since the formation of the State Agricultural Society, striven for superiority in the columns of the Farmer and Planter. What was the result brought about by, if that was not the incitement? At all events, something has produced a wondrous revolution among our planting friends. I remember well the reception of your bantling and your too truthful announcement, and that to my mortification—yes, to my humiliation, for it wounded my State pride much, I assure you, the simple statement of the bare fact, that there was but a single original communication in that number, April, 1856, and that was from my own hand and not the labor of fifteen minutes, for I wrote it very hurriedly, and I do not know that I even read it a second time before sending it to the Farmer and Planter. I then thought it disreputable that a State boasting so much of its chivalrous sentiment, its educational advantages, its couple net work of *Rail Roads*, and its vast Statesmanship, its educated and very intelligent planters, should have out of 3,000 farmers and planters, only one who thought of the agricultural paper of our glorious commonwealth. The justly celebrated and gallant Republic of South Carolina—a Republic of *letters*—a State that, according to the latest returns of the United States census, occupies the *front rank*. South Carolina is trumps if the census is correct, for that position, according to truth and facts, she *deserves*.

My object, dear Major, is not to pronounce an eulogium upon South Carolina, my much respected mother, for she speaks in trumpet tones, not to be mistaken, her own well-deserved fame. She has long since, to use the language of one of North Carolina's gifted sons, become to be considered, and that justly, the honored mother of great men. I set down to make a proposition, *which is this*: To give five dollars towards making up one hundred dollars; the award to be given as a premium for the

best Agricultural Communication, which shall be published in the columns of the Farmer and Planter during the next six months. The Committee for examination and award of said *premium*, to be appointed by the Executive Committee of the State Agricultural Society at their next meeting; and immediately after the issue of the December number, the Committee to be called together at some suitable point, and all communications submitted to that Committee, and they to determine the matter and present the *premium*.

Mr. Editor, I have read and heard much of that field of corn—so much that the subject has become trite, stale and unprofitable. I propose to write you a few lines upon that field of *clover*—Red Clover—I saw at my friend, Dr. Winsmiths. It is written that Proserpine delighted to wander upon the beautiful, the charming, the lovely and fruitful plains of Etna. I imagine that the beauteous Proserpine was enraptured in sportive visions, as she beheld numerous lakes and the transparent fountains which watered these delightful and fertile plains. But she should not have been more carried away with the delightfulness of the adjacent meadow and the modest and fragrant flowers, than I, while walking more than knee deep in clover on the flowery banks of the purling and gentle stream; as I gazed in admiration and pleasure upon the sweet-scented and valuable clover “stealing and giving odor,” the sequel proved that I was more fortunate than the beautiful Proserpine, for she was taken by Pluto, to the place of his abode, while I was ushered into the delightful presence of the angels of life upon the *Mount*, there to bask in the sunshine of their *smiles*—all over in clover.

The Dr. has reflected much credit upon himself by his beautiful and successful experiment, and done the cause of husbandry good. It need not be said hereafter, even by a doubting Thomas, that clover will not grow to perfection. It is an exceedingly important and nutritious vegetable. One thousand lbs. of dried clover contain—

Carbon,.....	550.
Phosphoric acid,.....	67.
Sulphuric acid,.....	47.
Chlorine,.....	37.
Magnesia,.....	37.
Lime,.....	28.
Potash,.....	28.
Nitrogen,.....	17.
Soda,.....	5.

Silica, alumina, iron, manganese, oxygen and hydrogen, make up the remainder.

My sheet is full, and I believe that I have written enough. Should you think these crude reflections worthy a place in your interesting and most useful battling, I say you can do as you think best for the glorious science you have so long and so valiantly fought.

Yours, sincerely, W. S. DOGAN.

Syloama, June 25, 1757.

For the Farmer and Planter.
Cattle Shows, &c.

MR. EDITOR:—Two against one is as unfair play in a war of words, as a fisty cuff. Your correspondent, “Hotch Potch,” has shewed at least as much *bravery* as *prudence*, in attacking two at a time. He must excuse me for declining a contest with *half* an adversary. I will now only *parry*, but not *return* his thrust until he has disposed of “Rigmarole,” and then act as inclination and circumstances may prompt.

My communication was intended for the consideration of your readers, and they will, I have no doubt, not be “puzzled to understand” which is most comprehensible, my *article* or the *garbled mixture* your correspondent has made of it. “Hotch Potch’s” desire to make himself understood by all your farming readers, is well illustrated by such quotations as “*argumentum ad hominem*,” “*Cui bono*,” *ad libitum*,” *in articulo mortis*,” &c. He objects to “sneers” in a previous part of his *essay*, and says they cannot be answered; *wonder what he calls his first paragraph in allusion* (I will not say in answer) to my communication?

I have no doubt the world “loves spectacles,” and as little doubt that it *needs instruction*. All I proposed, or do now propose, is to mix the two so that while it is enjoying one for its pleasure, it may receive the other for its benefit.

I have great respect for Dr. Lee, and veneration for the memory of Dr. Levil, but they were neither of them produced by cattle shows, and I question *very seriously* whether any *baby* ever exhibited at a cattle show in Georgia, will ever make such a man as either of them.

I have been laboring in favor of cattle shows for the last 20 years at least, with a full conviction of their value. I entertain no doubt that they have done much good and will do more, but I think their tendency to encourage *speculation and humbug*, may be diminished and their practical usefulness increased. This, and this alone, is the extent of my offending.

I wish to see the value of what are called the improved breeds fairly tested by experiment; what animals are best suited to different

localities ascertained, what crops are most profitable and how can they be produced without deterioration of the fertility of the soil, be answered, &c., &c. The climate and soil of South Carolina, differs in different sections. It might with propriety be divided into four: The mountain or upper section, the seaboard or lower section, and the upper and lower halves of the remaining portion. Let the action of our Society as it represents the whole State, be so modified—at least as far as may be, as to bring out the peculiar adaptedness of each section to its appropriate products. I have not and will not urge upon the Executive Committee, the hopeless task of attempting to "please every body," but I suggest for their consideration, such principles or measures as I think may conduce to the usefulness of our Society. This is my right, and I shall exercise it when the spirit moves me, despite sneers from any quarter.

Mr. Editor, good bye for the present.

AGRICOLA.

For the Farmer and Planter.

A Suggestion.

MR. EDITOR:—We respectfully suggest for the consideration of the Executive Committee of the State Agricultural Society, the following: A Premium is offered for a barrel of the best flour, without designating the quantity of the wheat that is to make this barrel of flour; we would suggest that this barrel of flour be made from not more than six bushels of wheat; a member having a flouring mill, may take a small portion of the heads from the grinding of 50 or 100 bushels of wheat, put it into a barrel and take the premium on it. This is not the man the Society intended to reward with a premium, but the planter that grows a variety of wheat, six bushels of which will make a barrel of the best flour.

SPARROWGRASS.

A very good suggestion, for we know a very superior article, "O K," may be made from 15 or 20 bushels to what can be proven six.—ED. F. & P.

Michigan State Agricultural College.—That institution is to be dedicated on the 13th inst. In connection with it is a farm of 700 acres, three miles east of Lansing. The tuition is free, and the students will be required to work three hours a day and be paid for their labor. There are accommodations for eighty students. It is the first State Institution established on the continent. Its original endowment was \$56,000, the proceeds of Salt Spring Lands, originally donated by the General Government to the Territory of Michigan. The sum of \$20,000 per annum for the next two years, has been nobly appropriated by the vigorous State of Michigan to this object.



The Farmer and Planter.

PENDLETON, S. C.

Vol. VIII, No. 8, : : : : August, 1857.

The Law of Newspapers.

We would call the especial attention of subscribers who intend discontinuing their paper without paying up all arrearages, to the following:

1. Subscribers who do not give express notice to the contrary, are considered as wishing to continue their subscriptions.
2. If subscribers order the discontinuance of their papers, the publisher can continue to send them until all arrearages are paid.
3. If subscribers neglect or refuse to take their papers from the office to which they are directed, they are held responsible till they settle their bill, and order the papers discontinued.
4. If any subscriber removes to another place without informing the publisher, and their paper is sent to the former direction, they are held responsible.
5. The court has decided that refusing to take a newspaper from the office, or removing and leaving it uncalled for, is *prima facie* evidence of an intentional fraud.

Acknowledgments.

Prof. A. D. BACHE, Superintendent U. S. Coast Survey, will accept our thanks for a large volume, with sundry plates of the "Report of the Superintendent of the Coast Survey, showing the progress of the Survey during the year 1855. And we are quite sure from a very cursory view that we have only had time to take of this very creditable work in appearance, that, being a sort of a Surveyor ourself; we shall be highly entertained and much pleased on a further examination of its contents.

To Correspondents.

J. C., Callhoun.—Many thanks, friend Cox, for another clever list of new subscribers. You have set a resolution to keep ahead of every body else, and are in a fair way to do it. It is just as we said when you importuned us into that "Scholarship"—whenever you make a "dead set" at a man, he might just as well consider himself Davy Crockett's coon, and "come down" at once. May such energy never flag.

BROOMEDGE.—Yes, here he is with another offering, and just at your heels, friend C.; don't take time to look back, or you are a caught man, and stripped as clean of your honors as was Sut Lovingood's body of "skin and har," by his stiff shirt.

It would not surprise us if many others of our friends were to follow these good examples; indeed we are looking for it constantly, for we find there is a stir in the camp, having received of late new names, more or less, by almost every mail. Nothing will effect more than good examples in a community.

The friends of the Farmer and Planter—and there are a number of them who are protesting against our giving up “the helm”—*must* do something more for us in the way of increasing our subscription list, than ever has been, or its a doomed paper, so far as we may be concerned, for having worked now near eight years for nothing and found ourself, we “have set a resolution,” and we’ll stick to it.

S. A. S., Greenville C. H.—Thank you, Col., for your kind letter, which we are very much tempted to publish; but as it is fashionable to challenge Editors instead of the writers of personal articles, we fear you may get us in a scrape. We don’t know that the Judge would fight, but he is not in a good humor with us any how, and so we will not risk him. And as for the Doctor, we *know* he has stood near the flash. And besides, we are not quite certain you have not slandered us (we know anti-book-farmers would say so), more than either of them did; and if so, our friends would, of course, expect us to call *you* out, and not aspiring to that sort of renown, we think it most prudent to “keep dark.” In answer to your query about the Yankee inventor of the steel pen, we *have* more than once wished he “had his non-split. But, Col., what about *that* corn of “Uncle Tom’s?” you have surely treated us badly about that corn—have the ants stood on their hind legs and eaten all up, and thereby prevented your complying with your promise to send us some? Do let us hear from you again on that or some other subject, taking care to guard against any allusion to “them book farmers.”

Answers to Enquiries.

C. L. S., Danielsville, Ga.—Your friend who ordered the paper sent to you, paid for the volume of last year, but not for the current volume, eight numbers of which have now been sent to you—no payment has been made.

New Dog Law.

We are authorized to say, that a fair price will be given for *dog skins*, even fat dog skins, from the face up to the bull; and the Editor will add a “bit” to the price of every sheep killing dog skin that may be offered.—Here’s a trump, brother Editors—who will follow suit?

We Second the Motion, friend Dogan.

We call the especial attention of our readers to the “*proposition*” of Col. W. S. DOGAN, page 191 of this No. Such “*communications*” or essays as might be drawn out in the way proposed by Col. D., would, every one must admit, add greatly, both to the interest and value of our humble and unpretending sheet. And if so,

would undoubtedly, by enhancing its value, correspondingly increase its patronage, which is of the utmost importance to a continuance of our, heretofore, poorly requited labors. Let us hear from all who feel disposed to “pitch in,” for “it’s a free fight,” as soon as possible, as the time allowed is short. It seems that the communications are all to be published in the “*next six months*,” and to end in the December No., and if so, the time was intended to commence running from the 1st of July, shortly after the date of Col. D.’s proposition, and not from the date of the August No., in which it will first appear. The time actually allowed to write and publish in, is only three months, to wit: From the middle of August, or near that time; when all our subscribers may receive their August No., to the middle of November, by which time all communications should come to our hands, to ensure their publication in the December No. So friends, it’s high time you had commenced scratching your heads and putting on your studying caps, preparatory to the contest. Send in your names, that we may state in our September No., how many have enlisted in the cause; and after that would be pleased to receive early, as many of the communications as possible, so that we may mete them out for the October, November, and December numbers. The writers, it appears, are not confined to any particular subject; each one may, therefore, choose his own subject, coming within the objects of our publication.

The South Carolina College.

Yes, good reader, the South Carolina College! What! do you suppose a farmer and planter would be infringing on the rights and privileges of the “learned professions” to speak of the College and its doings? Well, it may be so, we dare say there are some who would deny us the right to speak or be heard; but notwithstanding, we had intended to “venture one eye,” at least on it, but find our space will not allow of it at present, and consequently we can only add, that we have been favorably impressed with Col. PRESTON’s proposed change; but why, we would inquire, in enumerating all other schools, did Col. P. forget or *leave out* an agricultural school? Does he think he has embraced the science of agriculture by piece meals in his other schools? If it is so, we stand corrected, but if not, we have thought if he had left the Medical School, where it now is, for we understand we have one of no ordinary character in Charleston, and in its place given us an agricultural department, his views

might be more favorably entertained by the people at large.

Crops---Extracts from Letters.

We shall in future give to our readers some account of crops, by extracts from letters of our correspondents. Believing that a column or two of such extracts in each paper, will interest our readers, we desire our friends, whenever they write us on any subject, to add such short account of crops in their District or immediate neighborhood, as they may deem important to their brother farmers and planters. And as a beginning for our August number, we shall give a few extracts, which came to hand too late in June for the July number.

But first, the good COMET having passed by without knocking us into *pi*, we cannot resist a tribute of respect to it; and who can do the thing with more grace than our friend "Broomsedge"? from whose private letter we extract:

"DEAR MAJOR—Well, the 13th, the eventful 13th, which was to make a smash of all of us, has passed, while old Terra rolls over after the old fashion, and the sun, moon and stars don't seem to have been frightened from their propriety. The same old story—

And when the evening shades prevail,

The moon takes up her wondrous tale,

And nightly to the list'ning earth,

Repeats the story of her birth,'

will, doubtless, be good for another century or so. I don't know if the moon would't be justifiable in a desire to be knocked out of the family—beautiful daughter of Hyperion and Terra, she is always made the scape goat for all the caprices of the clerk of the weather, or the ignorance of those who are always too wise to be taught."

Murray's Ferry, Williamsburg Dist., June 15th.—"Prospects for corn are very good in this neighborhood, but cotton is sorry."

Traveller's Rest, Greenville Dist., June 23rd.—"Wheat crops were never better in this neighborhood."

Maybenton, S. C., July 6th.—"Our wheat harvest is satisfactory, and oats also. Corn looking tolerable well, and if we can get rain plenty from this out, will be good. Our cotton can't possibly make more than half crops."

From the small number of extracts as given above, it would seem that but few of our correspondents feel enough interested in the generally unpromising crops—except wheat—to say any thing about them. The fact is, with the exception just made, the crops generally are so discouraging, that our farmers and planters do not like to say much about them. We see from our exchanges every where south and west of Virginia, that the wheat crops were scarcely ever better; but on the other hand, that cotton was never worse.

We are not in favor of publishing accounts of early cotton blooms, believing that such accounts operate unfavorably to the planting interests. But some will publish such accounts to please their neighbors who may feel a disposition to brag on being ahead of others—a very natural thing, especially with overseers. Such reports are carefully collected and treasured up by men in our country, especially the North, for the use of the spinners and weavers of other countries. We saw, not long since, a statement already out from some house North, intended to get out the impression that the cotton crop of 1857 would be the largest ever raised. The account we saw was re-published in one of our agricultural exchanges, the "Southern Cultivator," we think (we have not the number before us at this writing), for the purpose of exposing its glaring misstatements and falsehoods, which was very cleverly done by the Editor. But to return to the actual state of crops at present (the middle of July); we presume but few have had the pleasure to brag on blooms amidst such hail storms and frosts, as we have had in the up-country almost up to date. We have the first cotton bloom yet to see for the year 1857. Corn was never more backward at this period of the year, and the oat crop cut off at least one-half, perhaps more on old up-land, by the continued drought which is yet pressing heavily and distressingly on many parts of the country.

On the whole, we have but little cause to boast on crop prospects ahead, and was it not that an ever watchful Providence has so much favored us in our wheat harvest, our forebodings of the future would be any thing but cheering to our readers. Let us, however, be of good cheer and hope for the best, do our duty and anticipate no evil. Let us turn our attention to such crops as may yet with more propitious seasons, be brought to assist in carrying us through another winter. Let us make and save all the hay and fodder possible on our farms. We may yet sow broadcast the early ripening or dwarf variety of corn for fodder. We may save a great deal of native grass hay from parts of every farm that stock cannot have access to; and last, though not by any means least, *recollect the turnip crop*. If you have not already done it, go to work at once and prepare for the largest crop of turnips that you have ever made; pen up a lot of old sedge field if you have no strong fresh land, plow deep, put on all the manure of any kind to be had on the farm, not forgetting all the ashes, whether leached or unleached. Then if you have not enough, haul ditch banks or muck from the swamp, spread on and plow, cross plow and harrow till you have a fine tilth, then sow in drills (preferable) or broadcast if you prefer. Afterwards thin out to a proper stand, and you will, with seasons, make a crop, half the value of which many of you have never dreamed of. Recollect you have no excuse of the want of seed. Mr. LEARMONT, of Columbia, who advertises in our paper, can and will on application, supply you with the best of seed.

For further information on turnip culture, we refer you to a letter to a friend in Greenville, by the mana-

ger of a farm near that place, which we have just received, with a request to publish.

State Agricultural Society---Reports, &c., &c.

An esteemed correspondent writes us a private letter, from which we make the following extract, in order to draw the attention of the Executive Committee to it. Perhaps the Committee may be able to answer the enquiry—we are not—but so far as the “resuscitating” of the “Agriculturist” is concerned, we will venture to say, the present Committee will not attempt the revivication of a thing which would not live, *could not* live for want of proper and adequate sustenance; but died, in spite of their honest efforts to sustain it, and is dead beyond redemption. No, we don’t believe they are saving their reports for the to-be newly re-erected bantling. It was not the intention at first of the Committee to publish the reports of the Judges. They were not even read at the time of awarding premiums, to the displeasure of some we know, but for this, the Committee, as we have heretofore said, were excusable for the want of time. We have heretofore said, and do yet think, the reports should have been handed over to the agricultural papers for publication. We have always found such reports interesting, and should have been pleased to receive those handed in at our Fair for publication. We should have published all that we thought worthy, with pleasure and *and without any charge* to the Society, without a *special organ* to be kept up by the Society. The Committee need to be at not *one-fifth*, perhaps not one-tenth the expense for printing, that it would be to sustain its organ with its poor individual patronage. We believe with the Committee, that an organ to be kept up by the Society, is *not* necessary or proper, the best interest of the Society being consulted, our friend, Dr. GIBBES’ opinion to the contrary nevertheless.

“We have heard nothing lately from the Executive Committee, but trust that they are considering about the restoration of the journal.—The Legislature has given \$5,000 for the annual support of the society, and the first duty, we conceive of the Committee is to appropriate one-half of the amount, if necessary; annually for the journal, until it can support itself. The Society must have an official journal to ensure success.”—*Carolinian*.

“Individual members,” undoubtedly *have* the right to “discuss at will the interests and doings of the Society,” and the Farmer and Planter will not reject or refuse to publish their communications when couched in respectful lan-

guage, and the discussion carried on with that decency and respect for its opinions and doings, as we *know* will characterize the communications of our liberal friend and correspondent. But to the extract.

“What have the Executive Committee done with the reports received at our last Exhibition? Are they saving them for another Agriculturist when they resuscitate it? I want to know how Dr. PARKER made “that corn,” and, I think the good of the Society requires that the reports received from competitors be given to the public*. I suppose individual members may work on their “own hook” for the good of the cause, and shall therefore, discuss at will, the interests and doings of the Society in the Farmer and Planter when ever the spirit moves me.”

*We will here remark, if the reports handed in to the Executive Committee, cannot be had, we will publish any of them that may be sent to us by the Chairman of the respective Committees, or by individuals concerned, who may have in their possession copies.

Our Exchanges.

We return our thanks to the conductors of our excellent exchanges generally,—dailies, weeklies and monthlies, for their prompt appearance on our board; and especially to our friends of the news press, who are so kind as to give us favorable and encouraging notices from time to time, are we under many and lasting obligations. May *they all* prosper in life to their own heart’s content, is our most sincere, *honest* wish. But if you do, friends, you will most assuredly be better paid for your devoted and deserving services, than is your humble servant, who is working for the *corporeal*, whilst you are contributing mainly to the *spiritual* man.

“Never too Late to do Good.”

The following communication came to hand, now a year since, but was mislaid, and hence its non-appearance heretofore. We lost a communication not long since in this way, which we much regret. We trust we will not discourage our friends from writing, by such carelessness, promising to be more careful in future.—
ED. F. & P.

On the Improvement of Worn out Land, and Deep Plowing.

MR. EDITOR:—I am satisfied from my experience that with a proper system and deep plowing, we can improve our worn out land, and below I will give you my system, and this is it: I have my farm fenced off in three divisions. I plant Field No. 1, the first year in cotton, and manure all I can of my cotton with stable and compost manure. Field No. 2, I plant in corn, and manure all I can of my corn with what

cotton seed I have. Field No. 3, I pasture, and as I have or keep but a small stock of cattle and hogs, they do not injure it much, and I find, since I have adopted that system with deep plowing, that my land is improving every year. I can assure any planter that shallow plowing will not do, for I have been using the plow for the last 20 years, and I have always plowed deep, and I am now satisfied that with the above system of farming and deep plowing and manuring a part of his cotton, or all, if he can, a planter will soon see that his land will improve every year, and I have never been able yet to manure more than one-fourth of my cotton since I have been practicing this system; but as I have got every thing in order about me, I think I shall be able to manure the greatest part of my cotton, for 1 acre well manured, will pay better than 3 or 4 acres not manured, and by manuring your cotton, you get two fine crops from one manuring; you get the first year, a fine crop of cotton, and the second year, you get a fine crop of corn. Some planters are afraid to plow deep, but no man that reads any agricultural work, would begin now-a-days to talk about shallow plowing, for I never have, in all my agricultural reading for the last twenty years, ever seen any thing to recommend shallow plowing. I go in for turning the yellow soil in our poor, worn out pine lands, and nothing less. Deep plowing is one of my hobbies in farming, and always has been and always shall be, and I am not to be convinced to the contrary. I will now conclude, Mr. Editor, by saying you can publish this if you wish, and also say, that I will, after awhile, give you a chapter on making and applying manure; also, on raising hogs, for I think I can give you a fine account of year old hogs this winter, as I have hogs or shoats now, that promise to give me a chance of telling you a good tale about them.

I am, yours, respectfully, W. BA.

For the Farmer and Planter.

We should be Economical.

MR. EDITOR:—As we are very dry in this section of country at present for the want of rain, not having had a good season of rain for more than six weeks, and the present being a very suitable time for the farmers to secure their wheat crops, I drop you a few thoughts on the subject of economy, which, perhaps, may not be entirely uninteresting to your readers.

Economy is a qualification or trait of character that few, perhaps, comparatively speak-

ing, possess, but notwithstanding, it is an essential and requisite qualification that all should have. It does not matter a great deal how much a person has, or can make of any thing if he does not use economy to save or take care of it. A person may be full and bountiful of any thing at any time, but without the proper use of economy in using it to make it last, he will very likely become scarce enough.

Within my own immediate observation, I am acquainted with several farmers who make good crops generally, and almost invariably, they are compelled to buy food or provision of some kind, before the end of the year. They do not make the old crop last till the new one comes in, but are obliged, besides buying some, to commence on the new just as early as it is ripe or fit to use. By this means, they are nearly always scarce of every thing in the way of provision, and have but little to sell. Now, why is all this? It is in my humble opinion, simply because they do not use economy.

I do not wish however, to hold up myself as a pattern for others to go by. I know that I should be found wanting in many particulars. Neither am I making any insinuations on any particular person, but only speak what I believe to be the plain truth.

And now as I have already alluded to the saving of wheat, let me say to all who may feel interested, that when a crop of any thing is made, the next thing is to take care of it. Now is the time for us to secure our wheat crops from the inclemency of wet or bad weather, while the weather is dry and favorable for that business. When we have succeeded in making a crop, we should try to save and take care of it, and it is not only as easy, but better for us to save it at the proper time. It does not require longer to do so at one time than another, even if we should have to stop our plows or some other work a day or two or even longer, we may realize considerably more than we might have made otherwise, had we not attended to it at once.

We should use economy in every thing else as well as in farming. What kind of economy would it be in a merchant, for instance, not to know at the end of the year, six months or even less, how he stands? He should always keep a balance book and be well posted up in relation to his affairs at any time. He should always endeavor to know with whom he trades, and be very careful to make no bad debts which he can possibly avoid. As much might be said relative to any other pursuit in life. We should,

therefore, watch and be diligent in whatever situation we may be placed, or in whatever occupation engaged.

Before closing this article, I may be allowed to state that I feel thankful that I can have it to say, (though not with any intention to boast, or any thing of that sort—far from it), that I have not been compelled to lay out as much as five dollars for provision of any kind made on the farm for man or beast, since the first year that I have been trying to farm for myself, but but on the contrary, I have had some little to sell almost every year.

Mr. Editor, if you think that the above remarks would be interesting to any of your readers, you can give them a place in your columns, but if otherwise, east them aside.

Yours, truly, T. F. A.

Calhoun, July 3d, 1857.

For the Farmer and Planter.
Weeds.

MR. EDITOR:—In some recent numbers of the "Farmer and Planter," I observe a discussion between yourself and others, on the subject of the indigenous weeds of the country; whether they should be exterminated or not, as useless, or worse still, as injurious cumberers of the ground. I see you take the affirmative side of the question, while "Broomsedge," in his quizzical, though sensible view of things, takes the opposite. I should just add a few words on the subject:

1st. Nature seems to provide these wide-spread weeds, to prevent undue exhalations from the surface. 2nd. To prevent the washings of the land. 3d. To add to the fertility of the soil; and this, probably more largely than we are apt to suppose; since drawing their nourishment principally from the atmosphere, their decay and return to the soil is clear gain to it. 4th. Another important consideration, is the early pasture, they, in their prolific abundance, supply to our sheep and cattle.

Two facts in point, occurring on my plantation, sustain me in these views. Last fall, after opening the middle of my alleys with two furrows, a crop of weeds in a green state, was listed in, and now the land has on it a handsome crop of corn, showing conclusively their importance as a fertilizer of the soil, when rightly used. Up to this time, no other manure has been used. Surely this is the cheapest means we possess of restoring our lands; guiding nature, by turning these weeds under the soil at the proper time, viz.: the fall of the year,

when they are still in a green state and before they have been touched by the frost.

The other and probably more important fact, I alluded to, is the abundant pasture these weeds afford sheep and cattle. My stock are now and have been for the past month in good order; mainly brought about by browsing on the weeds which appear so early as the first of March here, and so abundant as to fill up every inch of surface of uncultivated ground. There can be no mistake about it, as they have not been fed from the barn during the whole winter—a hard one—nor up to this time, is there a spear of Crab, Crow-foot or other grasses germinated in my fields. Surely the indigenous weeds, so properly scattered over our country, have their uses—and in my opinion, important uses.

They thus take the place of the green crops of the North and of the continent for soiling purposes, and also in a measure, of the turnip crop of England, which has done so much for that country in fattening stock for market and the dairy.

The objection that weeds injure the growing crop, is doubtless true, but we do not propose to allow them to appear in the crop, only in the grounds left fallow for pasturage from the previous year's cultivation, which, from my annual experience, will always give an abundant crop of weeds.

I am so fully impressed with the importance of these weeds, that I would consider it a great injury to the country if they were or could be exterminated; but rejoice to believe they could not be, for being indigenous, if destroyed one year, they would, under favorable circumstances, re-appear the next, in all their pristine vigor. Such are the resources of prolific nature.

Trusting that your agricultural journal will continue to prosper, I am, Mr. Editor,

Respectfully yours, L. M. D.

For the Farmer and Planter.
Turnips.

Having had ample opportunities of witnessing the turnip crop in this part of the country, I am sorry to see so many enlightened farmers sowing them broad cast. I will now lay down my method: First, to plow the land up to a good depth in October, then to sow rye or wheat immediately; if not, sow a crop of oats in the spring. Either of the three can be reaped about the first of July, by plowing up to a good depth immediately after reaping, of, say 7 inches, which gives the stubble and all other wild grasses a good chance to be into a good

state of manure by the 12th of August, which is soon enough to sow Swedish Turnips. Having the land well pulverized, draw the rows as near to 23 inches apart as possible with a turn plow, commencing on the straight side of the field with your draught downwards, and back in the same way, which sets the side on the next, then every downward draught forms the row, which is easy, knowing the breadth by measuring them from centre of top to top, besides, gives the waggon or cart all justice for running in the rows for manuring without harm.

I would say to put the manure down for 5 rows, 5 steps apart, to scatter and meet it well in the bottom of the rows; then split down the first made rows, which throws the earth on the top of the manure to make the rows as few as possible, then sow about 3 pounds of seed to the acre, which brings them on quick. When about an inch high, thin them out with a hoe, leaving them only 10 inches apart, and in about two weeks, hoe them all properly over, running the cultivator in the middle of the rows. After properly grown about the middle of November, put them all up in the field with about two inches of earth on them, only to keep out white frost. Then in the spring of the year, the land is under thorough cultivation for sowing down grass seeds.

THOMAS HENDERSON.

For the Farmer and Planter.

"Which is the Best Breed of Fowls?"

MR. EDITOR:—Permit me to give my experience with poultry, and in this way, answer the above question. Fifteen years ago, I determined to get the "best breed" of chickens, &c., and after looking at my neighbor's and consulting the Poultry Book, determined to commence with the game variety. They were bred for several years without any eggs in the winter and but few chickens in the summer and fall; the hens were so ill-natured that they killed more chickens in one day, than they would raise in one year. The "roosters" were perpetually at war, and if I commenced with two or three in the spring, I would rarely have more than one and sometimes but half a one at the close of the year. If one had proven himself of *genuine* pluck, I was teased until the gentlemen of the pit got him for "the main," and thus I contributed to that relick of barbarism, cock fighting. Conscience and a desire to have a better breed, induced me to cross them with Polands, and the common Dominica muf-

fled stock of the neighborhood; they did remarkably well for one year, but were too delicate for this climate, and were crossed upon the game, common and Ostrich stock, which gave me a chicken of good size, and in every way better than either of the pure blooded.—The famous epidemic, "Shanghai fever," then prevailed, and I paid an enormous price for a pair of the most symmetrical birds that had ever been seen. My friend from "Raven's Croft," sent me a dozen eggs, and I just believed the "best breed" had been found at last. The pullet raised me four broods of chickens in a little more than ten months, and not a chick died a natural death. Two years more has satisfied me that if a man wishes to get "clean out of chickens and eggs, let him stick to these *lazy, ever hungry, knotty legged, omniverous Asiatics*."

Last year a few of the best pullets, with some of the Dorking, Ostrich, Java and Carolina Switch Tail, were thrown together with a Mexican game, Dorking and *Pootra* cock, thinking from all these best sorts, the very *best* or the very *worst* breeds would originate. I am better satisfied with them than any fowls I have ever grown. They are of good size, fine layers, and every way worthy the name of a good breed. To continue the experiment, I have thrown into the crowd a Sumatra cock, all the way from Georgia, and a Bantam (half Seabright and half Cuba), and from this omnigenus, expect "The best breed." I do not know how many eggs they may lay, but I do know they are of good size, healthy, active, and of all colors, from "snowy white to sooty," and of beautiful appearance. I doubt whether many of them will have the image of the Georgian stamped on them, for he is, most of the time, on the trot, for fear of a threshing from the little Bantam. If this be a specimen of the pure blooded Sumatra game, I wonder the "Executive Committee" have offered a premium for them at the next Fair; I promise not to exhibit any of the stock.

Now, that the "Shanghai fever" has abated; and the price fallen from \$50 to 50 cents per pair, I would advise T. McN., to get two or three smooth legged pullets, as many S. C. scratchers, Ostrich, Poland or golden Hamburgs, cross them upon a Mexican game and a spotted Dorking cock, (if he can get him pure), *feed well* winter and summer with sulphur and Cayenne pepper occasionally, (as condiments or prophylactics), fresh water and lime, and guard against vermin and "*varmints*," he will have good fat pullets and plenty of eggs.

In conclusion I would add, the cocks should be changed every year, always keeping young ones. The hens may be kept as long as they continue to lay.

"LITTLETON."

July, 1857.

A Cheap Bee Hive, &c.

Here is his plan for cheap bee hives.

When the *profit* of bee culture is the only object, of course the cheapest route to reach that point will be adopted. If with a hive costing twenty-five cents we secure the same results as with one costing five dollars, we save just the difference. If any one desires ornamental hives to correspond with his establishment in other respects, that is different, and there can be no objection, of course, but the extra expense should not be charged to the bees as a necessary outlay. With these preliminary remarks, I will proceed to describe a hive in its simplest form, but one which will give every facility for obtaining the purest honey to be had, in any style.

First. The general form of the hive is a wooden box, the internal size being say twelve inches square and fourteen inches high, made of sound boards an inch in thickness, and unplanned either within or on the outside, except at the edges, to make close joints. To construct it, cut boards fourteen inches long, two of them twelve inches wide, and two fourteen inches wide. These nailed together at the edges, the wider ones being put over the edges of the other two, will make the inside size as above, viz.: twelve inches square and fourteen inches high, and the hive will contain a little over two thousand cubic inches.

The size is important. There should be room for brood and for storing a winter supply of honey in *one department*. If too small, an insufficient supply of food will be stored; if too large, more honey than is necessary will be stored in the hive, when it ought to be in boxes above for profit.

I stated that the size should be about two thousand cubic inches, but I would vary the size with the latitude. Say south of 40 degrees, where the winter is comparatively short, a less size will do, as a less quantity of honey for food will be required. But here another point must be kept in view; there *must* be room for all the brood combs needed by the queen, otherwise the stock will run down for want of new recruits. From several experiments to ascertain this point, eighteen hundred inches is indicated as all the room necessary for that purpose. Perhaps the last size would be the proper one for profit any where south of the latitude of 40 degrees, and in no case would less than one cubic foot (1728 inches) be advisable.

For the top, take a board fifteen inches square, which would allow it to project half an inch over each side of the hive. Plane only the upper side. Around the edges of the planed side, rabbet out the corners half an inch deep, and an inch inward, so that another box a little larger than the main hive, can be set over it and fit into the rabbeted edge of the cover. Through the cover, make two rows of holes, say about three inches each side of a line drawn through its centre — These holes should be made uniformly distant, because it is necessary to have a rule to go by in making glass boxes to fit over them. A pattern to make the holes by is very convenient. The cover can then be nailed on.

Make a small opening for the passage of the bees in the front side of the hive, either at the bottom, or part away up; or, what is better, in both places. These will be sufficient for ventilation, except, in hot weather, when the front side of hives containing full stock should be raised half an inch or so to admit air. Put sticks across the inside to support the comb, close the

holes in the top, and this part of the hive is ready for the bees.

The honey to be removed from the bees is stored by them in glass boxes set upon the top of the hive. There may be two or four of these, the number depending upon the size desired, and they can be 6 inches, and 6½ or 12½ inches long. The top and bottom is made of wood and the sides of glass. For the wood take thin boards, and plane down to one-fourth of an inch, cut the proper length and width, and make holes in the bottom of the hive. The posts or corner-pieces are five inches long, and say five-eighths of an inch square. In two adjacent sides of each piece make a narrow groove or channel, one-fourth of an inch deep, for glass to fit in. Fasten these upright pieces upon each corner of the bottom by nailing through into the end. The glass sides previously cut of the proper size, are then slipped down into the grooves. Next stick fast to the top piece some pieces of new white comb, an inch square, as a beginning for the bees — one edge dipped in melted wax and applied before boiling will hold these bits of comb fast. Then put this top piece on, fastening it to the top of the upright posts of the corner with small nails. The boxes can be set away until wanted for use. The glass sides may be cut from common window panes. From the size above indicated, that is 5 inches high, and 6 or 12 inches long, panes 10 by 12 inches cut up without waste. The small upright corner piece may be worked out in long strips, and then cut up to the required length. A thin grooving plane, or a saw, will cut the grooves for the glass readily.

A covering over the glass box is necessary: This is to be made of boards, say 7 inches deep, and exactly 13 inches square on the inside, so as to fit down upon the rabbeted edge of the cover to the main hive, and shut out all light. Bees will work in such boxes without the rabbeting around the edge of the top, but unless there is a close joint to shut out light, the glass and combs do not appear so clean as when it is perfectly dark.

I have thus given a full description of all that is really needful in a bee-hive. But those who wish can have the outside planed and painted, and add moldings, dentals, and any amount of ornaments; as long as the principle is observed it will not interfere with the prosperity of the bees. Even an excess of ornament would be attended with less expense than most patent hives not half as good. There is not the least necessity of the simple hive costing twenty-five cents, the cover to the boxes 12½ cents, stand 6 cents, roof 6 cents, or all complete for 50 cents. The glass boxes would cost the same for any hive, and are not reckoned.

The stands for the hive to rest upon and the roofing, are yet to be described. The stand is made of inch boards, 15 inches wide by 2 feet long, the ends nailed on pieces of wood or joists from two to four inches square, and put directly on the ground, with the hive on the back end. The advantages of this arrangement are sufficient to balance any little trouble of keeping down weeds, grass, &c. The roof is made by two boards, 10 by 24 inches, nailed together like a house-roof, and laid on the top loosely. One great advantage of separate stands is, there is no difficulty in allowing plenty of room between stocks, which is an important consideration.

Boiled Bread Pudding.—Grate half a pound of stale bread, pour over it a pint of hot milk; and leave the mixture to soak for an hour in a covered basin; then beat it up with the yolks of two eggs. Put the whole into a covered basin just large enough to hold it, which must be tied up in a cloth and placed in boiling water for half an hour.